

## Some Schools Examinations



## on Algebra and Statistics

1

Cairo Governorate

Nozha Directorate of Education  
Nozha Language Schools

Answer the following questions :

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1 Choose the correct answer :

- 1 The degree of the algebraic term  $5xy^2$  is .....
- (a) zero (b) 2 (c) 3 (d) 5
- 2 The number  $\frac{x+3}{x-5}$  equals zero if  $x = \dots\dots\dots$
- (a) -3 (b) 3 (c) 5 (d) -5
- 3 The multiplicative inverse of  $\left(\frac{2}{5}\right)^0$  is .....
- (a) 1 (b) -1 (c)  $-\frac{2}{5}$  (d)  $-\frac{5}{2}$
- 4 The mode of the numbers : 5 , 8 , 4 , 9 and 8 is .....
- (a) 9 (b) 4 (c) 8 (d) 5
- 5 The H.C.F. of  $12x^3 + 6x^2$  is .....
- (a) 6 (b)  $6x^2$  (c)  $x^2$  (d)  $3x^2$

2 Complete :

- 1  $(x - y)(x + y) = \dots\dots\dots$
- 2  $(3x + 5)^2 = \dots\dots\dots + 30x + \dots\dots\dots$
- 3 The arithmetic mean of the values : 5 , 4 , 8 , 3 , 10 is .....
- 4  $(3x - \dots\dots\dots)^2 = \dots\dots\dots - 12x + 4$
- 5 The number that lies half way between  $\frac{2}{7}$  and  $\frac{6}{7}$  is .....

3 [a] 1 Add :  $5a - 2b + 4c$  and  $4b - 3a + c$ 2 Subtract :  $2x^2 + 5xy - y^2$  from  $(2x + y)^2$ [b] Factorize by using the H.C.F :  $4x^2y^3 - 2xy^2 + 6x^3y$ 4 [a] Divide :  $x^2 - 5x + 6$  by  $x - 2$  (where  $x \neq 2$ )[b] Use the distribution property to find :  $\frac{5}{9} \times 4 + \frac{5}{9} \times 6 - \frac{5}{9}$ 5 [a] Simplify :  $(x - y)(x + y) - (x - y)^2$  , then calculate the numerical value of the result when  $x = 2$  ,  $y = -1$ 

[b] Find the mean and the median of the values : 20 , 15 , 25 , 10 , 30 , 7

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2

Cairo Governorate

Rod El-Farag Educational Zone  
St. Mary's School

Answer the following questions :

## 1 Choose the correct answer :

1 If the arithmetic mean of the numbers : 5 , 8 , 7 , k , 9 , 3 is 6 , then k = .....

- (a) 3 (b) 4 (c) 5 (d) 6

2 The multiplicative inverse of the number  $\frac{3}{4}$  is .....

- (a)
- $\frac{4}{3}$
- (b)
- $-\frac{3}{4}$
- (c)
- $-\frac{4}{3}$
- (d) 1

3 If  $(x - 6)(x + 6) = x^2 + k$  , then k = .....

- (a) -10 (b) 36 (c) 10 (d) -36

4 If the order of the median of a set of values is the fourth, then the number of these values equals .....

- (a) 3 (b) 5 (c) 7 (d) 9

5 The rational number that lies on third of the way between 8 and 12 from the smaller is .....

- (a)
- $8\frac{1}{3}$
- (b) 10 (c)
- $9\frac{1}{3}$
- (d)
- $10\frac{2}{3}$

6  $|-3| + |-5| =$  .....

- (a) 2 (b) -2 (c) 8 (d) -8

## 2 Complete :

1 The algebraic term  $6xy^3$  whose degree is .....

2 The mode of the values : 3 , 3 , 5 , 4 , 4 , 3 is .....

3  $(2x - 3)(4x + 5) =$  ..... + ..... - .....

4 1 , 4 , 9 , 16 , ..... , ..... (in the same pattern)

5 The number  $\frac{5}{x-4}$  is rational if  $x \neq$  .....3 [a] Subtract :  $3x^2 - 5xy + 6y^2$  from  $2x^2 - 4xy - 2y^2$ [b] Find the quotient :  $2x^3 + 11x^2 + 12x - 9$  by  $x + 3$  where  $x \neq -3$ 4 [a] Find three rational numbers between :  $\frac{1}{2}$  and  $\frac{2}{3}$ [b] Simplify to the simplest form :  $(2x - 3)(2x + 3) + 7$ , and calculate the numerical value of the result when  $x = 1$ هذا العمل حصري على موقع ذاكرولي التعليمي ويسمح بمشاركته فقط ولا يسمح بتداوله على أي مواقع أخرى  
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5. [a] Use the distribution property to find the value of :  $\frac{7}{9} \times 14 + \frac{7}{9} \times 6 - \frac{7}{9} \times 2$

(without using the calculator)

[b] This table shows a pupil's marks of mathematics in five months :

Month	Oct.	Nov.	Dec.	Feb.	March
Marks	40	30	55	45	35

Find : 1 The arithmetic mean of the marks.

2 The median of the marks.

3 Cairo Governorate

Meedi Zone  
Degla Valley Language School



Answer the following questions :

1 Choose the correct answer :

1 The arithmetic mean of the numbers : 3 , 6 , 1 , 6 is .....

(a) 4 (b) 3 (c) 6 (d) 18

2 The mode of the values : 4 , 5 , 4 , 3 , 4 is .....

(a) 3 (b) 4 (c) 5 (d) 4.5

3 The degree of the algebraic expression :  $5x^3 + 2x^2 - 7$  is the .....

(a) fifth. (b) third. (c) first. (d) second.

4 If  $\frac{x}{y} = \frac{2}{3}$  , then  $\frac{3x}{2y} = \dots\dots\dots$

(a)  $\frac{1}{5}$  (b)  $\frac{3}{2}$  (c)  $\frac{9}{4}$  (d) 1

5 If  $\frac{x+3}{x-7} = 0$  , then the value of  $x$  is .....

(a) 3 (b) -7 (c) -3 (d) 7

6 The median of the values : 2 , 1 , 6 , 5 , 7 is .....

(a) 2 (b) 6 (c) 5 (d) 7

2 Complete :

1  $\frac{3}{4} = \dots\dots\dots \%$

2  $(x-5)(x+5) = \dots\dots\dots$

3  $12x^2y^3 \div 4xy = \dots\dots\dots$

4 The remainder of subtracting  $-7x^2$  from  $2x^2$  is .....

5 The rational number that lies at half the way between :  $\frac{1}{4}$  and  $\frac{1}{2}$  is .....



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3 [a] If  $x = \frac{3}{4}$ ,  $y = \frac{-5}{2}$ , find in the simplest form the value of :  $(x - y) \div (x + y)$

[b] Add :  $3x^2 + 2x - 5$  and  $2x^2 - 5x + 3$

4 [a] Divide :  $\frac{10x^5 - 6x^3 + 4x^2}{2x^2}$

[b] Use the distribution property to find the value of :  $\frac{3}{7} \times \frac{5}{6} + \frac{3}{7} \times \frac{7}{6} - \frac{3}{7}$

[c] Complete :  $3x^2 - 6xy = 3x(\dots\dots\dots)$

5 [a] Simplify :  $(2a - 3)(2a + 3) + 7$

[b] Write three rational numbers between :  $\frac{1}{3}$  and  $\frac{5}{6}$

[c] Find the mean of the values : 2, 5, 3, 6, 9

4

Giza Governorate

Al-Agoza Directorate  
Supervision of Math

Answer the following questions :

1 Choose the correct answer :

1 If  $\frac{3}{x-5}$  is a rational number, then  $x \neq \dots\dots\dots$

(a) zero (b) 3 (c) -5 (d) 5

2 The algebraic term  $2x^2y$  is of the  $\dots\dots\dots$  degree.

(a) first (b) second (c) third (d) fourth

3 If  $5a = 45$ ,  $a = 1$ , then  $b = \dots\dots\dots$

(a)  $\frac{1}{9}$  (b) 5 (c)  $\frac{1}{5}$  (d) 9

4 Fifth the number  $5^{10} = \dots\dots\dots$

(a)  $5^9$  (b)  $5^5$  (c)  $5^{11}$  (d)  $3^9$

5 The value of the digit 7 in the number 0.4753 is  $\dots\dots\dots$

(a)  $\frac{7}{10}$  (b)  $\frac{7}{100}$  (c)  $\frac{7}{1000}$  (d) 7

6 The mode of the values : 5, 7, 3, 5 is  $\dots\dots\dots$

(a) 5 (b) 7 (c) 3 (d) 4

2 Complete :

1  $(2a - 3b)(a + 5b) = 2a^2 + \dots\dots\dots - \dots\dots\dots$

2 If three times a number is 15, then fifth this number is  $\dots\dots\dots$



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3 The number which lies at half the distance between :  $\frac{1}{2}$  and  $\frac{3}{4}$  is .....

4  $5a^2$  increases  $-3a^2$  by .....

5 The median of the values : 4 , 8 , 3 , 5 , 7 is .....

3 [a] Use the distribution property to get the result of :  $\frac{3}{5} \times 2 + \frac{3}{5} \times 6 - \frac{3}{5} \times 3$

[b] Simplify :  $(2x - 3)(2x + 3) + 7$

4 [a] Find two rational numbers between :  $\frac{1}{3}$  and  $\frac{1}{2}$

[b] What is the increase of :  $7x + 5y + z$  than  $2x + 6y + z$  ?

5 [a] Factorize by taking out the H.C.F. :  $18x^2y^3 + 6x^3y^2 - 3x^2y^2$

[b] If the arithmetic mean of the values : 8 , 7 , 5 , 9 , 4 , 3 ,  $k + 4$  is 6 , find the value of :  $k$

5

Giza Governorate

Omrania Directorate  
El-Sadet Governmental Language School

Answer the following questions :



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1 Choose the correct answer :

1 The algebraic term  $7xy^3$  whose degree is .....

(a) 1 (b) 2 (c) 3 (d) 4

2 The remainder of subtracting  $3x$  from  $5x$  is .....

(a)  $2x$  (b)  $-2x$  (c)  $8x$  (d)  $2x^2$

3 The median of the values : 4 , 8 , 3 , 5 and 7 is .....

(a) 3 (b) 4 (c) 5 (d) 7

4 If  $\frac{a}{b} = 1$  , then  $5a - 5b =$  .....

(a) zero (b) 1 (c) 3 (d) 5

5 The mode of the values : 7 , 3 , 7 , 2 and 7 is .....

(a) 3 (b) 7 (c) 2 (d) 5

6 If  $\frac{15}{x} = \frac{3}{4}$  , then  $x =$  .....

(a) 20 (b)  $-20$  (c) 5 (d)  $-5$

2 Complete each of the following :

1 The multiplicative inverse of  $-\frac{7}{5}$  is .....

2 The additive identity element in  $\mathbb{Q}$  is .....



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- 3 The mean of the numbers : 6 , 4 , 1 , 5 and 9 is .....
- 4 If  $\frac{x+3}{x-2} \in \mathbb{Q}$  , then  $x \neq$  .....
- 5 The rational number in half way between :  $\frac{1}{7}$  and  $\frac{5}{7}$  is .....

- 3 [a] Add :  $5x^2 - 7xy + 4y^2$  and  $4x^2 + 5xy - 9y^2$   
 [b] Use the distribution property to find :  $\frac{8}{13} \times 11 + \frac{8}{13} \times 9 + \frac{8}{13} \times 6$

- 4 [a] Simplify :  $(x-5)(x+5) + 25$  , then find the value of the result if  $x = 3$   
 [b] Find three rational numbers between :  $\frac{1}{3}$  and  $\frac{1}{2}$

- 5 [a] Factorize by taking out the H.C.F. :  $27x^3y^2 - 9x^2y^3 + 3xy$   
 [b] The following table shows the distribution of marks of 20 students in an exam :

Marks	7	8	9	10	Total
No. of students	5	9	4	2	20

Find the mode of these marks.

## 6 Alexandria Governorate

Middle Educational Zone  
Math's Supervision



Answer the following questions :

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قنوات ذاكرولي  
على تطبيق التليجرام

- 1 Complete each of the following :

- 1 If  $\frac{4}{6} = \frac{12}{x}$  , then  $x + 2 =$  .....
- 2 The multiplicative inverse of  $-\frac{2}{3}$  is .....
- 3  $\frac{1}{2} =$  ..... %
- 4 The rational number in half way between  $\frac{3}{5}$  and  $\frac{4}{5}$  is .....
- 5 If  $a + 3b = 7$  , and  $c = 3$  , then the numerical value of :  $a + 3(b + c)$  is .....
- 6 The arithmetic mean of the set of values : 2 , 3 , 8 , 2 , 5 equals .....

- 2 Choose the correct answer :

- 1  $0.0635 \approx$  ..... to the nearest hundredth.  
 (a) 0.63 (b) 0.07 (c) 0.06 (d) 0.063
- 2  $0.7 + 0.\dot{3} =$  .....  
 (a) 1 (b) 3.7 (c)  $0.\dot{3}7$  (d)  $1\frac{1}{30}$
- 3 If the order of the median of a set of values is the fourteenth, then the number of these values equals .....  
 (a) 27 (b) 15 (c) 7 (d) 28



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- 4  $(4x - 3)(x - 4) = \dots\dots\dots$   
 (a)  $4x^2 - 19x - 12$  (b)  $4x^2 - 7$  (c)  $4x^2 - 12$  (d)  $4x^2 - 19x + 12$
- 5 The mode of the values : 3 , 3 , 4 , 4 , 5 , 3 is .....  
 (a) 4 (b) 22 (c) 5 (d) 3

3 [a] Multiply :  $(2x + y)(x + 2y)$  , then find the numerical value at :  $x = 2$  ,  $y = 1$

[b] Use the distribution property to find :  $\frac{7}{12} \times \frac{23}{45} + \frac{17}{12} \times \frac{23}{45} - 2 \times \frac{23}{45}$

4 [a] Divide :  $x^3y - 4xy^2 + 6xy + x^2y^2$  by  $xy$

[b] Find three rational numbers between :  $\frac{4}{5}$  and  $\frac{2}{3}$

5 [a] Subtract :  $5x^2 + y^2 - 3xy$  from  $x^2 - 2xy + 3y^2$

[b] The following table shows the marks of Alaa in maths tests in 6 months :

Month	Oct.	Nov.	Dec.	Feb.	March	April
Mark	41	35	47	37	44	48

Find : 1 The median for the previous marks. 2 The mean for the previous marks.

## 7 Alexandria Governorate

El-Montaza Educational Zone  
Meth's Supervision



Answer the following questions :

1 Choose the correct answer :

- 1 The additive inverse of the number  $(-\frac{1}{5})^0$  is .....  
 (a) 1 (b) -1 (c) 5 (d)  $\frac{1}{5}$
- 2 The degree of the algebraic expression :  $3x^2 + 5xy^2 + 6y^2$  is .....  
 (a) zero (b) second (c) third (d) fourth
- 3 If  $\frac{x}{y} = 1$  , then  $3x - 3y = \dots\dots\dots$   
 (a) zero (b) 1 (c) 3 (d) 6
- 4 If the arithmetic mean of six values is 12 , then the sum of these values equals .....  
 (a) 2 (b) 6 (c) 18 (d) 72
- 5 The rational number that lies at the midpoint of the distance between  $\frac{1}{4}$  and  $\frac{1}{3}$  is .....  
 (a)  $\frac{1}{12}$  (b)  $\frac{7}{12}$  (c)  $\frac{3}{4}$  (d)  $\frac{7}{24}$
- 6 The length of a rectangle is  $2x$  cm. and its width is  $y$  cm. , then its perimeter = .....  
 (a)  $2xy$  (b)  $3xy$  (c)  $2x + y$  (d)  $4x + 2y$



هذا العمل حصري على موقع ذاكرولى التعليمى ويسمح بمشاركته فقط ولا يسمح بتداوله على أي مواقع أخرى  
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2 Complete :

1  $2x^3 \times 3xy = \dots\dots\dots$

2  $2\frac{1}{5} \times \dots\dots\dots = 1$

3 The remainder of subtracting  $(-3x)$  from  $(2x)$  is  $\dots\dots\dots$

4 If the mode of the values : 7 , 5 , a + 3 , 5 , 7 is 7 , then a =  $\dots\dots\dots$

5 The median of the values : 5 , 9 , 7 , 4 , 3 , 8 is  $\dots\dots\dots$

3 [a] Use the distribution property to find the value of :  $\frac{5}{17} \times 10 + \frac{5}{17} \times 23 + \frac{5}{17}$ .

[b] Add :  $2a - 3b + 5c$  and  $3a + b - 5c$

[c] Divide :  $6x^2y^2 + 9x^2y^3$  by  $6x^2y^2$  ( $x \neq 0, y \neq 0$ )

4 [a] If  $a + b = \frac{5}{4}$  and  $b + c = \frac{3}{4}$  , find the value of :  $a + 2b + c$

[b] From :  $5x^2 + 4x - 3$  subtract :  $4x^2 - 5x + 3$

[c] Simplify :  $(x - 1)^2 + (x + 3)(x - 3)$

5 [a] Factorize :  $12a^2b + 18a^3b^2$

[b] If  $a^2 = 25$  ,  $b^2 = 9$  and  $ab = 15$  , then find the value of :  $(a - b)^2$

[c] If the arithmetic mean of the values : 3 , 5 and  $x + 2$  is 4 , then find the arithmetic mean of the two values :  $5 - x$  ,  $5 + 2x$

[d] If the set of ages of pupils in one school is as follows :  $\{7, 9, 13, 6, 8, 12, 10, 14, 11\}$  , find the median age of this set.

8

El-Kalyoubia Governorate

Directorate of Education  
Math Supervision

Answer the following questions :

1 Choose the correct answer :

1  $|-5| - |2| = \dots\dots\dots$

(a) 3 (b) -7 (c) 10 (d) -3

2 If the arithmetic mean for the numbers 3 , 5 ,  $x$  is 4 , then  $x = \dots\dots\dots$

(a) 3 (b) 4 (c) 5 (d) 6

3 The remainder of subtracting  $9x$  from  $7x$  equals  $\dots\dots\dots$

(a)  $2x$  (b)  $-2x$  (c)  $16x$  (d)  $-2$

4 If 6 , 5 , 12 and  $x$  are proportional numbers , then  $x = \dots\dots\dots$

(a) 8 (b) 10 (c) 5 (d) 7



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- 5 The algebraic term  $3x^2y$  is of the ..... degree.  
 (a) third (b) fourth (c) fifth (d) sixth
- 6 If the mode of the values : 7 , 5 ,  $x + 4$  , 5 , 7 is 5 , then  $x =$  .....  
 (a) 1 (b) 4 (c) 5 (d) 7

2 Complete each of the following :

- 1  $5x^2 + 15xy = 5x(\dots + \dots)$
- 2 12 % of 500 kg. = ..... kg.
- 3 The median of the values : 4 , 8 , 3 , 5 , 7 is .....
- 4 The rational number which hasn't a multiplicative inverse is .....
- 5 The rational number that lies one third of the way between 8 and 12 from the smaller number is .....

3 [a] Find three rational numbers that lie between :  $\frac{1}{2}$  and  $\frac{1}{3}$

[b] Simplify to the simplest form :  $(x + 5)^2 + (x + 2)(x - 2)$

4 [a] 1 Subtract :  $5x^2 + y^2 - 3xy - 1$  from  $6x^2 - 2xy + 3y^2$

2 Divide :  $x^2 - 5x + 6$  by  $x - 3$  (where  $x \neq 3$ )

[b] If  $a = \frac{3}{4}$  ,  $b = -\frac{5}{2}$  , find in the simplest form the numerical value of :  $\frac{a + b}{a - b}$

5 [a] The length of a rectangle is  $4x$  cm. and its width is  $3x$  cm. calculate its area.

[b] The following table shows Gehad's marks in mathematics exam in 6 months :

Month	October	November	December	February	March	April
Mark	20	25	42	27	40	50

Find the arithmetic mean of the marks.

9 El-Gharbia Governorate

East-Tanta Educational Directorate  
Al-Salam Language School



Answer the following questions :

1 Complete each of the following :

- 1  $\frac{3}{4} + 50\% = \dots$
- 2  $\frac{4}{5} = \dots\%$
- 3 The additive inverse of the number  $|\frac{2}{3}|$  is .....

تابع جديد زاكروولي على  
فيسبوك  
تويتر  
وانس اب  
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هذا العمل حصري على موقع ذاكرولي التعليمي ويسمح بمشاركته فقط ولا يسمح بتداوله على أي مواقع أخرى  
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- 4 The most repeated value of a set of values is called .....
- 5 The smallest natural number is .....
- 6 If the arithmetic mean of the values : 8 ,  $x$  , 7 , 5 is 6 , then  $x =$  .....

2 Choose the correct answer :

- 1 The number  $\frac{5}{3} >$  .....
- (a)  $\frac{10}{3}$  (b)  $\frac{25}{9}$  (c)  $\frac{10}{6}$  (d)  $\frac{3}{5}$
- 2 If  $3a = 27$  and  $a = 1$  , then  $b =$  .....
- (a)  $\frac{1}{9}$  (b)  $\frac{1}{5}$  (c) 5 (d) 9
- 3 The coefficient of the algebraic term  $-5x^2y$  is .....
- (a) 5 (b) -5 (c) 3 (d) -3
- 4 The median of the values : 11 , 18 , 7 , 10 , 21 is .....
- (a) 10 (b) 11 (c) 7 (d) 21
- 5 The H.C.F. of :  $10x^2 + 5x$  is .....
- (a)  $2x$  (b)  $5x$  (c) 5 (d)  $x$

3 [a] Add :  $2a - 3b + 5c$  and  $3a + b - 5c$

[b] Divide :  $x^2 + 6x + 5$  by  $x + 5$  (where  $x \neq -5$ )

4 [a] Use the property of distribution to find the value of :

$$\frac{6}{37} \times 7 + \frac{6}{37} \times 5 + \frac{6}{37} \times (-11)$$

[b] Factorize by identifying the H.C.F. :  $27x^4 - 18x^3$

5 [a] Add :  $2x + y + 5$  and  $3x + 2y - 1$

[b] 1 Find the mode of : 2 , 4 , 7 , 4 , 5

2 Find the median of : 4 , 8 , 3 , 5 , 7

10 El-Dakahlia Governorate

Math's Supervision



Answer the following questions :

1 Choose the correct answer :

1 If  $a \times \frac{b}{3} = \frac{a}{3}$  , then  $b =$  .....

- (a)  $\frac{a}{3}$  (b) 0 (c)  $a$  (d) 1



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2] If the mode of the values : 7 , 5 ,  $y + 3$  , 5 and 7 is 7 , then  $y = \dots\dots\dots$

- (a) 3 (b) 4 (c) 5 (d) 7

3] The algebraic term  $2^2 x^3 y^2$  is of the  $\dots\dots\dots$  degree.

- (a) third (b) fourth (c) fifth (d) seventh

4]  $(15x^4 + 5x^3) \div 5x^3 = \dots\dots\dots$

- (a)  $3x^2 + x$  (b)  $5x^2 + 1$  (c)  $3x + 1$  (d)  $4x^4$

5] The rational number that lies in half way between  $\frac{1}{3}$  and  $\frac{5}{9}$  is  $\dots\dots\dots$

- (a)  $\frac{2}{3}$  (b)  $\frac{3}{4}$  (c)  $\frac{4}{9}$  (d)  $\frac{5}{27}$

6] The additive inverse of the number  $(\frac{1}{2})^{\text{zero}}$  is  $\dots\dots\dots$

- (a) 2 (b) -1 (c) 1 (d) -2

2] Complete each of the following :

1] The order of the median for the values : 4 , 8 , 7 , 5 , 3 is  $\dots\dots\dots$

2]  $0.18 - 30\% = \dots\dots\dots$

3] If  $(2x + y)^2 = 4x^2 + kxy + y^2$  , then  $k = \dots\dots\dots$

4] If  $\frac{5}{a+2}$  is a rational number , then  $a \neq \dots\dots\dots$

5] The arithmetic mean for the values : 18 , 35 , 24 , 7 is  $\dots\dots\dots$

3] [a] Use the distribution property to find the value of :

$$\frac{7}{12} \times \frac{23}{45} + \frac{17}{12} \times \frac{23}{45} - 2 \times \frac{23}{45}$$

[b] Subtract :  $(-x^2 - 4x + 7)$  from  $(3x^2 - 4x - 2)$

4] [a] Factorize by identifying the H.C.F. :  $3a(4a + 5b) - 2b(4a + 5b)$

[b] Find three rational numbers between :  $\frac{4}{5}$  and  $\frac{2}{3}$

5] [a] Simplify to the simplest form :  $(y - 3)(y + 3) + 9$

[b] The following table shows a student's marks of mathematics in 6 months :

Month	Oct.	Nov.	Dec.	Feb.	March	April
Mark	41	35	47	37	44	48

Find : 1] The median for the previous marks.

2] The mean for the previous marks.



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11

Suez Governorate

Directorate of Education  
Mathematics Inspectorate

Answer the following questions :

1 Choose the correct answer :

1 The multiplicative inverse of  $(\frac{1}{2})^0$  is .....

- (a) 2 (b) -2 (c) 1 (d) -1

2 The degree of the algebraic term  $6x^3y^2$  is ..... degree.

- (a) third (b) fourth (c) fifth (d) sixth

3  $2ab^2 \div \text{zero} = \dots\dots\dots$

- (a) undefined. (b) zero. (c)  $ab$  (d)  $2ab^2$

4 If the mode of the values : 7 , 5 ,  $x+4$  , 5 , 7 is 5 , then  $x = \dots\dots\dots$

- (a) 7 (b) 4 (c) 5 (d) 1

5 If  $\frac{5}{x+2}$  is a rational number , then  $x \neq \dots\dots\dots$

- (a) -2 (b) 0 (c) 2 (d) 5

6 The number that lies half way between  $\frac{1}{3}$  and  $\frac{5}{9}$  is .....

- (a)  $\frac{2}{3}$  (b)  $\frac{3}{4}$  (c)  $\frac{4}{9}$  (d)  $\frac{5}{27}$

2 Complete :

1  $2\frac{1}{5} \times \dots\dots\dots = 1$

2 If the order of the median of the values is fourteenth , then the number of these values is .....

3 The result of subtracting  $-7x$  from  $2x$  is .....

4  $(2x-3)(x+5) = 2x^2 + \dots\dots\dots - 15$

5 The arithmetic mean of the values : 1 , 6 , 8 , 4 , 6 is .....

3 [a] By using the distribution property , find the value of :  $\frac{3}{7} \times 2 + \frac{3}{7} \times 6 - \frac{3}{7}$

[b] Find three rational numbers between :  $\frac{1}{2}$  and  $\frac{1}{3}$

4 [a] Find the quotient :  $2x^2 + 13x + 15$  by  $x+5$

[b] Simplify to its simplest form :  $(x+3)(x-3) + 9$   
, then find the numerical value at  $x=5$

5 [a] What is the increase of :  $7x + 5y + 2$  than  $2x + 6y + 7$  ?

[b] Factorize by taking out the H.C.F :  $12a^2b + 18a^3b^2$



هذا العمل حصري على موقع ذاكرولي التعليمي ويسمح بمشاركته فقط ولا يسمح بتداوله على أي مواقع أخرى  
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12

Port Said Governorate

East Educational Administration  
Math Orientation

Answer the following questions :

1 Complete each of the following :

- 1  $24 x^4 y^6 = 6 x^2 y^3 \times \dots\dots\dots$
- 2 The remainder of subtracting  $-3x$  from  $2x$  is  $\dots\dots\dots$
- 3  $1, 1, 2, 3, 5, 8, \dots\dots\dots$  (in the same pattern).
- 4 If the mode of the values :  $7, 5, a+3, 5, 7$  is  $7$ , then  $a = \dots\dots\dots$
- 5  $5x^2 + 15xy = 5x(\dots\dots\dots + \dots\dots\dots)$

2 Choose the correct answer from those given :

- 1 The algebraic term  $8x^3y^2$  is of the  $\dots\dots\dots$  degree.  
(a) third (b) fourth (c) fifth (d) sixth
- 2 The rational number that lies in half way between  $\frac{1}{3}$  and  $\frac{5}{9}$  is  $\dots\dots\dots$   
(a)  $\frac{2}{3}$  (b)  $\frac{3}{4}$  (c)  $\frac{4}{9}$  (d)  $\frac{5}{27}$
- 3 The multiplicative inverse of the number  $(\frac{1}{2})^{\text{zero}}$  is  $\dots\dots\dots$   
(a) 2 (b)  $-2$  (c) 1 (d)  $-1$
- 4 If  $\frac{5}{x+2}$  is a rational number, then  $x \neq \dots\dots\dots$   
(a)  $-2$  (b) zero (c) 2 (d) 5
- 5 The median of the values :  $5, 4, 7$  is  $\dots\dots\dots$   
(a) 4 (b) 5 (c) 7 (d) 16
- 6 If the arithmetic mean for the set of values :  $3, 5, x+2$  is 4  
, then the arithmetic mean for the two values :  $5-x, 5+2x$  is  $\dots\dots\dots$   
(a) 6 (b) 4 (c) 3 (d) 2

3 [a] Use the distribution property to find the value of :  $\frac{3}{7} \times 2 + \frac{3}{7} \times 6 - \frac{3}{7}$ [b] Find three rational numbers that lie between :  $\frac{1}{2}$  and  $\frac{1}{3}$ 4 [a] What is the increase of :  $7x + 5y + z$  than  $2x + 6y + z$  ?[b] Divide :  $14x^2y - 35xy^2 + 7xy$  by  $7xy$ ,  $x \neq \text{zero}$ ,  $y \neq \text{zero}$ 5 [a] Simplify to the simplest form :  $(x-3)(x+3) + 9$ 

هذا العمل حصري على موقع ذاكرولى التعليمي ويسمح بمشاركته فقط ولا يسمح بتداوله على أي مواقع أخرى  
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[b] The following table shows Gehad's marks of mathematics in 6 months :

Month	October	November	December	February	March	April
Mark	30	35	42	37	44	50

Find the arithmetic mean of the marks.

### 13 Kafr El-Sheikh Governorate

Mathematics Inspectorate  
Language Schools



Answer the following questions :

#### 1 Choose the correct answer :

- 1 The median of the values : 7 , 3 , 4 , 5 , 2 is .....  
(a) 7 (b) 5 (c) 4 (d) 3
- 2 The rational number  $\frac{x-7}{x+3} = \text{zero}$  , when .....  
(a)  $x = -3$  (b)  $x = 7$  (c)  $x \neq 3$  (d)  $x \neq 7$
- 3 The quotient of dividing  $2.25 \div 1.5 = \dots\dots\dots$   
(a) 1.5 (b) 15 (c) 0.15 (d) 500
- 4 The arithmetic mean of the numbers : 3 , 9 , 1 , 7 is .....  
(a) 20 (b) 5 (c) 4 (d) 3
- 5  $(x^2 + x) \div x = \dots\dots\dots$   
(a) zero (b)  $x$  (c)  $2x + 1$  (d)  $x + 1$
- 6  $|\frac{-5}{3}| \dots\dots\dots \text{zero.}$   
(a)  $<$  (b)  $=$  (c)  $>$  (d)  $\leq$

#### 2 Complete :

- 1  $6b^3 = 2b \times \dots\dots\dots$
- 2 The mode of the values : 7 , 5 ,  $a + 4$  , 5 , 7 is 7 , then  $a = \dots\dots\dots$
- 3 The additive inverse of  $[4 \times (-1 \frac{1}{4})]$  is .....  
(a)  $4 \times (-1 \frac{1}{4})$  (b)  $4 \times 1 \frac{1}{4}$  (c)  $4 \times (-1 \frac{1}{4})$  (d)  $4 \times 1 \frac{1}{4}$
- 4 The degree of the algebraic term :  $3^2 x^2 y^2$  is .....  
(a) 2 (b) 4 (c) 6 (d) 8
- 5 The rational number that hasn't a multiplicative inverse is .....  
(a) 0 (b) 1 (c) -1 (d) 2

#### 3 [a] Subtract : $5x^2 + y^2 - 3xy$ from $x^2 - 2xy + 3y^2$

[b] Use the distribution property to find :  $\frac{5}{7} \times 5 + \frac{5}{7} \times 10 - \frac{5}{7}$

[c] Simplify :  $(2x + 3)(2x - 3) + 7$



هذا العمل حصري على موقع ذاكرولي التعليمي ويسمح بمشاركته فقط ولا يسمح بتداوله على أي مواقع أخرى  
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- 4 [a] If  $x = \frac{3}{4}$ ,  $y = -\frac{5}{2}$ , find the numerical value of :  $(x - y) \div (x + y)$   
 [b] Divide :  $6x^2 - xy - 15y^2$  by  $2x + 3y$  where  $(2x + 3y) \neq 0$   
 [c] Add :  $3a^2 + 2a + 5$  and  $2a^2 - 5a + 3$

- 5 [a] Factorize by identifying the H.C.F. :  $12xy^3 + 18xy^2$   
 [b] Find four rational numbers between : zero and  $\frac{1}{2}$   
 [c] The following table shows Gehad's marks of mathematics in 6 months :

Months	October	November	December	February	March	April
Marks	31	35	42	36	46	50

Find : 1 The arithmetic mean. 2 The median.

## 14 El-Menia Governorate

Maghagha Educational Directorate  
St. Mark & El Tawfik Schools



Answer the following questions :

- 1 Choose the correct answer :
- 1 The number  $\frac{x-3}{x+5}$  is a rational number if  $x \neq \dots\dots\dots$   
 (a) 3 (b) -5 (c) 5 (d) -3
- 2 The mode of the values : 3 , 3 , 4 , 4 , 5 , 3 is  $\dots\dots\dots$   
 (a) 4 (b) 22 (c) 5 (d) 3
- 3  $\frac{3y}{5} - \frac{y}{5} = \dots\dots\dots$   
 (a)  $\frac{2}{5}$  (b)  $\frac{y}{5}$  (c)  $\frac{2y}{5}$  (d)  $2y$
- 4 The algebraic expression :  $x^3 - 3x^2 + 4$  is of the  $\dots\dots\dots$  degree.  
 (a) 1<sup>st</sup> (b) 2<sup>nd</sup> (c) 3<sup>rd</sup> (d) 4<sup>th</sup>
- 5 If  $\frac{15}{x} = \frac{-3}{4}$ , then  $x = \dots\dots\dots$   
 (a) -20 (b) -5 (c) 5 (d) 20
- 6  $(x + y)(x - y) = \dots\dots\dots$   
 (a)  $2x$  (b)  $(x - y)^2$  (c)  $x^2$  (d)  $x^2 - y^2$

2 Complete the following :

- 1 The mean of the numbers : 10 , 4 , 7 , 3 , 1 is  $\dots\dots\dots$   
 2 If  $(x - y)(3x + 2y) = 3x^2 + kxy - 2y^2$ , then  $k = \dots\dots\dots$



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- 3 The coefficient of the algebraic term  $(-5xy^2)$  is .....
- 4 The rational number which hasn't a multiplicative inverse is .....
- 5 If the order of the median of a set of values is fourth, then the number of these values is .....

3 [a] Find three rational numbers lying between :  $\frac{1}{3}$  and  $\frac{1}{2}$

[b] Simplify :  $(2x + 3)^2 - 12x$ , then find the numerical value of the result at  $x = -2$

4 [a] Using the distribution property, find the value of :  $\frac{3}{7} \times 10 + \frac{3}{7} \times 5 - \frac{3}{7}$

[b] Divide :  $(x^2 + 6x + 5)$  by  $(x + 5)$  where  $(x \neq -5)$

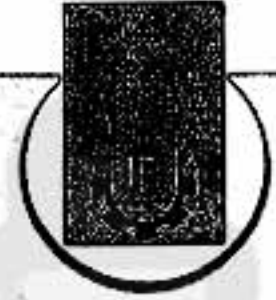
5 [a] Factorize by taking out the H.C.F. :  $3m^4n^2 - 6m^3n^3 + 9m^2n^4$

[b] Subtract :  $(-x^2 - 4x + 7)$  from  $(x^2 - 4x - 2)$

[c] Find k if the arithmetic mean of the values : 27, 8, 16, 24, 6, k is 14

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Aswan Governorate

M.M. Yeckoub English Language  
Government School

Answer the following questions :

1 Choose the correct answer :

- 1 The algebraic term  $6x^3y$  is of the ..... degree.  
(a) first (b) fourth (c) sixth (d) fifth
- 2 The mode of the values : 7, 5,  $x + 4$ , 5, 7 is 5, then  $x =$  .....  
(a) 1 (b) 4 (c) 5 (d) 7
- 3 If the rational number  $\frac{x-2}{x+3} = 0$ , then the value of  $x =$  .....  
(a) 1 (b) 2 (c) -2 (d) -3
- 4 The multiplicative inverse of the number  $3\frac{2}{5}$  is .....  
(a)  $-3\frac{2}{5}$  (b)  $3\frac{2}{5}$  (c)  $\frac{17}{5}$  (d)  $\frac{5}{17}$
- 5 Subtracting  $-2x$  from  $3x$  equals .....  
(a)  $x$  (b)  $-5x$  (c)  $5x$  (d)  $-6x^2$
- 6  $(3x + 5)(x + 2) = 3x^2 + \dots + 10$   
(a) -7 (b)  $11x$  (c)  $5x$  (d)  $7x$



2. Complete :

1  $5x^3y^3 \times \dots = 15x^4y^5$

2 If  $\frac{x}{y} = 1$ , then  $5x - 5y = \dots$

3  $1\frac{2}{5} \times \dots = 1$

4 The number that lies at half way between  $\frac{1}{4}$  and  $\frac{5}{8}$  is  $\dots$

5 The median for the values : 4 , 8 , 3 , 5 , 7 is  $\dots$

3 [a] Add :  $3x - 2y + 5$  and  $x + 2y - 2$

[b] Find three rational numbers that lie between :  $\frac{1}{4}$  and  $\frac{1}{2}$

4 [a] Use the distribution property to calculate :

$$\frac{7}{12} \times \frac{23}{45} + \frac{17}{12} \times \frac{23}{45} - 2 \times \frac{23}{45}$$

[b] Divide :  $21x^2y - 7xy + 35xy^3$  by  $7xy$

5 [a] What is the increase of :  $8x + 4y + 3z$  than  $2x + 6y - z$  ?

[b] Simplify to the simplest form :  $(5x - 2)^2 - (5x - 2)(5x + 2) + 7$

[c] The following table shows Habiba's marks of mathematics in 6 months :

The month	Oct.	Nov.	Dec.	Feb.	March.	April
The mark	41	35	47	37	44	48

Find the arithmetic mean of the marks.

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